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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,793	12/10/2003	Richard F. Dominach	KIRU-0028	8216

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EXAMINER
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RIDER, JUSTIN W

ART UNIT	PAPER NUMBER
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2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/733,793	DOMINACH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Justin W. Rider	2626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/2004 (1 Sheet)</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is responsive to communications: Application filed 10 December 2003.

Claims 1-14 are pending.

#### *Information Disclosure Statement*

- 2 The information disclosure statement(s) (IDS) submitted on 04 May 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

#### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 6-8, 11 and 14 rejected under 35 U.S.C. 102(b) as being anticipated by **Lai et al. (USPN 6,006,183)** referred to as **Lai** hereinafter.

Claims 1 and 11: **Lai** discloses a system and method for speech recognition disambiguation, comprising:

- i. a speech recognition component that receives recorded audio or speech input (col. 3, lines 20-22) and generates:
- ii. one or more tokens (*words*) corresponding to the speech input (col. 3, lines 25-30, '*The recognition function (190) translates the acoustic signal in to text, i.e. one or more words, '*); and

iii. for each of the one or more tokens, a confidence value indicative of the likelihood that the a given token correctly represents the speech input (col. 3, lines 29-30, *'each word is assigned a confidence level, '*);

iv. a selection component that identifies, according to a selection algorithm, which two or more tokens are to be presented to a user as alternatives (col. 3, lines 45-50, *the processes described select pairs and code them based on both preset and user parameters.*);

v. one or more disambiguation components that perform an interaction with the user to present the alternatives and to receive a selection of alternatives from the user, the interaction taking place in at least a visual mode (col. 3, lines 40-42, *'The user may also provide information, via the use control (140), '*; and

vi. an output interface that presents the selected alternative to an application as input (col. 3, lines 60-64, *'the pairs are then displayed on an output device (105), '*).

Claim 4: Lai discloses a system as per claim 1 above, wherein the one or more disambiguation components perform said interaction by presenting the user with alternatives in a visual mode (col. 3, lines 60-64), and by receiving the user's selection in a visual mode (col. 4, lines 11-15, *'The graphical user application (150) may accept information from the user control (140) to control the threshold... '*).

Claim 6: Lai discloses a system as per claim 1 above, wherein the one or more disambiguation components perform said interaction by presenting the user with alternatives in a visual mode (col. 3, lines 60-64, *represented by a visual display interface that allows the user to interact with the system.*), and by receiving the user's selection in a visual mode (col. 4, lines 11-

15, *'The graphical user application (150) may accept information from the user control (140) to control the threshold... ').*

Claim 7: **Lai** discloses a system as per claim 1 above, wherein the selection component filters the one or more tokens (*words*) according to a set of parameters (col. 3, lines 36-39).

Claim 8: **Lai** discloses a system as per claim 1 above, wherein the set of parameters is user specified (col. 3, lines 36-39).

Claim 14: **Lai** discloses a system as per claim 11 above wherein the interaction comprises the user selecting from among the plural alternatives using visual input (col. 3, lines 60-64, *represented by a visual display interface that allows the user to interact with the system.*).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lai**.

Claim 2: **Lai** discloses a system as per claim 1 above, however failing to specifically disclose wherein the disambiguation components and the application reside on a single computing device. The examiner is taking Official Notice that based on the claim sets and figures (*specifically Fig. 1*), it would have been obvious to one having ordinary skill in the art to determine that this system is implemented on a single device. It is inherent within the scope of

the invention, as well as in the art, that such computing systems must either reside on a single computing device or on a plurality of devices (e.g. distributed system).

Therefore, based on the teachings of **Lai**, it would have been obvious to one having ordinary skill in the art at the time of invention that a speech recognition disambiguation system would be implemented on a single computing device because it reduces the complexity and allows a user to use the device without having to connect to another separate, distributed device, which would require a communications link (e.g. wireless communications, Internet).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lai** in view of **Bennett et al. (USPN 6,633,846)** referred to as **Bennett** hereinafter.

Claim 3: **Lai** discloses a system as per claim 1 above, however failing to, but **Bennett** does, specifically disclose wherein the disambiguation components and the application reside on separate (*distributed*) computing devices (Fig. 1; col. 6, lines 1-3, '*to provide a word and phrase recognition system that is flexibly and optimally distributed across a client/platform computing architecture, '*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Bennett** in the system of **Lai** because it provides an environment that achieves improved accuracy, speed and uniformity for a wide group of users (col. 6, lines 4-5).

8. Claims 5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lai** in view of **Haddock et al. (USPN 5,265,014)** referred to as **Haddock** hereinafter.

Claim 5: **Lai** discloses a system as per claim 4 above wherein alternatives are presented to the user in a visual form (col. 3, lines 60-64, *represented by a visual display interface that allows the user to interact with the system.*), however failing to, but **Haddock** does, disclose allow the user to select from among the alternatives using both a visual input as well as a voice input (col. 3, lines 13-15, *'Similarly, a touch screen, speech recognition apparatus, or other pointer...may be used to receive the referential input.'*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Haddock** in the system of **Lai** because it has a user interface that facilitates natural language communication between a user and a computer database by providing means for a user to remove a referential (*input*) ambiguity by pointing to a displayed textual reference (col. 2, lines 54-59).

Claim 12: **Lai** discloses a system as per claim 1 above wherein alternatives are presented to the user in a visual form (col. 3, lines 60-64, *represented by a visual display interface that allows the user to interact with the system.*), however failing to, but **Haddock** does, disclose allow the user to select from among the alternatives using both a visual input as well as a voice input (col. 3, lines 13-15, *'Similarly, a touch screen, speech recognition apparatus, or other pointer...may be used to receive the referential input.'*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Haddock** in the system of **Lai** because of the reasons outlined above.

Claim 13: **Lai** discloses a system as per claim 1 above in which alternative forms of a user input are presented, however failing to, but **Haddock** does, specifically disclose wherein a

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user selects from a plurality of presented alternatives in order to disambiguate a natural language input to a computer system (Abstract; col. 3, lines 24-28).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Haddock** in the system of **Lai** because of the reasons outlined above.

9. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lai** in view of **Bond et al. (USPN 6,539,348)** referred to as **Bond** hereinafter.

Claim 9: **Lai** discloses a system as per claim 1 above, however failing to, but **Bond** does disclose wherein an iterative process is used in order to disambiguate and narrow down possible interpretations of a natural language input (col. 2, lines 14-16, *'Further reduction in the number of syntactic interpretations is made possible...reiterated until no further reductions, '*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Bond** in the system of **Lai** because it allows machines the ability to recognize context of words through a rigorous method of narrowing down possibilities providing a more accurate depiction of a user input (col. 1, lines 10-25).

Claim 10: **Lai** discloses a system as per claim 1 above, however failing to, but **Bond** does disclose whereby the number of iterative stages is limited to a specified number (col. 2, lines 14-16, *'until no further iterations, '*). **Bond** discloses wherein it would be advantageous to continue a disambiguation iteration until no further narrowing is possible, so therefore, the number of iterations is specified by the amount of ambiguity within an input token.



Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the teachings of **Bond** in the system of **Lai** because of the reasons outlined above.

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Namba et al. (USPN 5,321,608)**, **Nagao et al. (USPN 5,424,947)**, **Brown et al. (USPN 5,477,451)**, **Holt et al. (USPN 5,960,447)**, **Beauregard et al. (USPN 5,974,413)**, disclose natural language disambiguation; **Duan et al (USPN 6,223,150)** discloses disambiguation that allows a user to select from alternatives.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin W. Rider whose telephone number is (571) 270-1068. The examiner can normally be reached on Monday - Friday 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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05 April 2007



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